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LESSONS IN WOOD-ENGRAVING.

II.

Now you are ready for work. Sit with the light directly in front of you. This enables you to see more readily the thickness of the lines which you cut than if the light was at the side. . Any table which stands firmly will answer. Place upon this something solid, supporting the sand-bag at such a height as to bring the block conveniently near the eye without your being obliged to bend over it. Arrange your tools in regular order upon the table, by your side, and begin. If you are to engrave a subject which has much work upon it and will take much time, you cover the whole surface of the drawing with thin paper, removing only a small portion at one time as you proceed. This answers a double purpose: it keeps the drawing clean, and prevents its being defaced by rubbing, and it also keeps the eye on the spot where you are at work and prevents it from being distracted by those parts of the subject with which you are not immediately concerned. Rub the edges of the block with common beeswax until they are well coated; then take thin paper, and stretching it tightly over the surface of the drawing rub it down on the beeswax with anything smooth and hard until it adheres. This is much more convenient than mucilage, as the paper can be pulled off and fresh paper put on at any time. Now cut away a small portion of the paper over the part on which you wish to work, removing more from time to time as you proceed. It is also well to cover the part which you have already engraved, as delicate lines might be defaced by continual rubbing.

Hold the block and the tool as represented in Fig. 8. The tool is held with the handle in the palm of the hand, secured by the ends of the fingers pressing against it, while the thumb is extended on the block to steady the blade which slides along by it, and to counteract the force exerted by the palm of the hand which drives the tool forward. The action of the tool is precisely that of a plough; the point being inserted in the wood, it is pushed straight forward, cutting a furrow as it goes, lifting out and clearing away the wood in front of it. When a line is to be curved, it is done partly by turning the hand with the tool, and partly by turning the block, which is done with great convenience on the firm surface of the sand-bag.

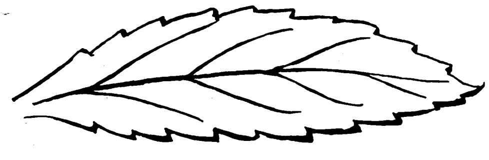

FIG. 9. THE SIMPLEST FORM OF WOOD-ENGRAVING.

For your first attempt at actual work, suppose you draw on a small piece of wood some very simple subject, a leaf for instance, as shown in Fig. 9, a mere outline, but thickened in parts to give character and indicate which way the light strikes it. Take one of your tools, the second or third from the finest, and beginning at one end of the leaf, cut a line with it along close by the side of the drawn line. Follow along the side of the leaf, carefully cutting exactly to the black line. Turn the block around and do the same on the other side of the same line, observing with care to leave the standing line just as it is drawn, with all its variations of thickness. It is generally better to cut on the side of the black line which is nearest you—that is, to have the tool between youself and the line. Treat all the lines of the leaf in the same manner, carefully preserving their relative thickness.

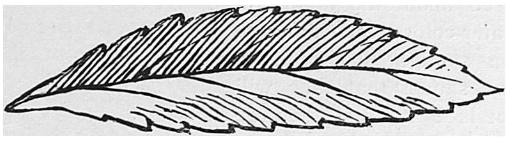

FIG. 10. SHADING OF THE ABOVE.

Having thus secured your black line, take a tool a few grades thicker than the one you have been using and cut away some of the wood on each side, so as to leave the black line standing clear and visible. This being done take larger tools and cut away all the blank wood to a sufficient depth, remembering that the larger the blank space, the deeper it must be scooped out, so that the paper shall not be pressed in and touch the bottom, thereby becoming dirty and blackened in the printing. Having cleared away all the blank wood and left the lines standing, you have made a wood-cut, which may be printed from like any other, is complete within its limitations, and represents the whole theory of wood-engraving.

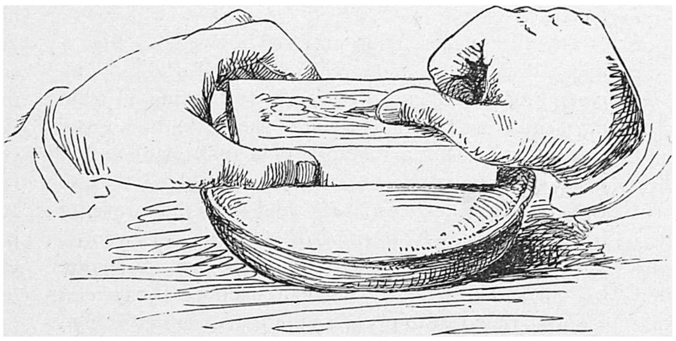

FIG. 8. SHOWING POSITION OF THE HANDS IN WOOD-ENGRAVING.

Of course this is the simplest form of mechanical work, merely cutting away the white about an outline. But you have learned a great deal when you can do this neatly. Let us now suppose that you wish to go a step farther and shade the leaf, so as to give a certain appearance of reality and relief to it, as in Fig. 10. The first thing to be done is to take your finest tool and cut a very thin but perfectly clean white line outlining every black line which the shade comes against. This white line is not perceived when the work is finished, but enables you to make a neat line which you could not otherwise do. Now you cut the shade with tools of proper thickness, being careful to keep the lines as uniform and parallel as you can, of course varying in thickness and distance apart as the shade is darker or lighter. The white lines which you have previously cut show you exactly where to stop the lines in cutting the tint or shade, and make the chips come out easily, leaving the ends of the lines clean where they come against the outline or veins of the leaf. The wood being solid beyond the line you are less likely to break through and spoil the outline than if you had cut on both sides of it before cutting the lines which stop against it. As you advance in the art, you will learn to consider what part you ought to cut first in order to facilitate the execution of the whole. Probably the tint tool coming against the outline at various angles will not completely and cleanly finish the ends of the lines representing the shade. Do not be troubled by this, but go on and finish the mass of tint; then take a sharp-pointed graver and cut out the little triangular bits left at the ends of the lines.

When you have become more skilled in the use of your tools you will learn that the best way to cut a tint is not to have the lines drawn on the block, but a smooth wash of the proper depth, in which you will produce the lines you desire by means of the tint tools.

When the shaded part is completed, you may go on and finish the outlines of the subject, and clear away the blank wood as before. In order to avoid bruising or battering the lines in digging out the white spaces, lay over them a small piece of strong cardboard, which coming under the tool serves as a fulcrum whereby the chips may be lifted out as they are cut in short strokes somewhat as a mouse nibbles wood.

For trying the effect of your work, a small ink ball with a little fine printing ink is requisite. The ball is generally made of a piece of strong and smooth silk stretched over a bunch of wool and tied tightly (Fig. 11.) Take a very small quantity of ink, and on a piece of marble, thick glass, or even the back of a plate or saucer, beat or dab it with the ball until it is thoroughly "distributed," as printers say, or beaten into a thin, smooth coating, and then gently pat the surface of your engraving. Do not rub or smudge it, but beat it squarely on the surface of the lines.

There must be no appreciable thickness of ink. only a thin film as it were. The ink is so adhesive and opaque that a very little will by continued beating, blacken the surface of the lines, and show you the effect of your engraving. Look it over carefully, and if you see anything which can be improved, any little bits of black which ought not to be there, pick them out with proper tools. If you wish then to take an impression see that your lines are all thoroughly inked; then lay a piece of India proof paper upon the block, and upon that a thin, smooth card. Then burnish the card with a paper folder or some smooth, hard, rounded thing—the handle of a tooth-brush answers very well—until an impression of the cut on the paper is the result.

You cannot do better than to repeat this subject several times, until you can make a neat, clean piece of work of it. If you persist until you have mastered this, it will be more pleasure to you to go on to something of more importance, and you will feel more confidence in attempting such a subject as Fig. 12, a string of pearls lying upon a table, which has roundness in the pearls, relief produced by cast shadow, perspective, and background, all effected in the simplest manner. You will observe that all the lines except the outlines run in the same direction.

Begin by outlining the pearls with your thinnest graver made very sharp. You would not suppose that there was any line between the pearls and the background, but on close examination, you will discover that where the tint comes against them there is a thin white line, almost imperceptible when the cut is finished. This is necessary to detach them in appearance from the background. It is not needed between the pearl and the solid black shadow, nor between the shadow and the tint. The cast shadow is part of the background, and should not be separated from it. Draw the shadows of the right form with sharp, hard edges, and then stop each line of the tint exactly and squarely against these edges. The result will be a clear and definite outline to the shadows, such as you see in the example.

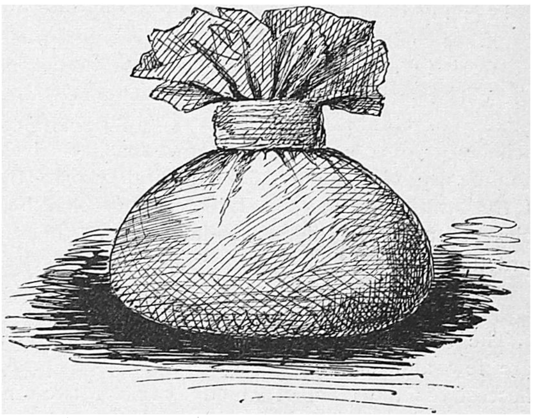

FIG. 11. INK-BALL FOR TAKING A PROOF.

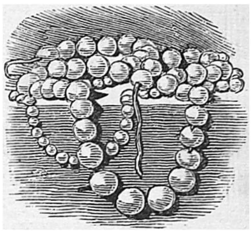

FIG. 12. A MORE ADVANCED LESSON.

You will observe that this tint, although it has a general flatness and uniformity, still is not perfectly smooth. The lines are not altogether continuous. The tint is engraved in irregular patches of short lines, not quite meeting each other, and with no care as to their matching, but only to keep the same general depth of shade. Then with a thinner tool the lines are either joined by short cuts, or the ends of them brought nearly together are left unjoined, thus producing a subdued irregularity and variety.

Now come the pearls. They consist of a patch of pure white on the light side, and a tint covering the rest, darkest near the broad light, thereby making it seem brighter, and becoming lighter toward the shaded side, where it runs into a broad white line forming the outline of the pearl on that side. This represents the reflected light which is always thrown upon the shaded side of objects; and upon the proper proportion of this light depends in a great degree the roundness of the objects represented. You will find on close examination of the larger pearls in front that the tint on them is very little lighter than the ground against which they hang. The effect of relief is produced by the broad, sharp, direct light, the soft reflected light, and the shadow which they cast.

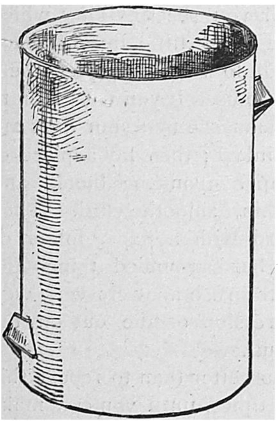

FIG. 1. ZINC COVER FOR CLAY MODEL.

This will be a valuable lesson, and it would be well for you to repeat it until you can produce the effect which you see here. When you can do this you are in a position to make another step in advance, and are now capable of undertaking a subject in which the parts are separated from each other by distance and atmosphere. C. M. J.

(To be continued.)

HOW TO MODEL IN CLAY.

It is my desire in the following articles to give a brief but comprehensive sketch of the actual method of work in modelling in clay as it is practised at present, especially for the use of students who are unable to obtain the practical training of an art scholar or of a working master or teacher. I shall confine myself to the actual details of the work, which I trust will be found, as I intend they shall be, so clear that any intelligent reader can put them into practice. J. S. Hartley.

I. MATERIALS NECESSARY IN MODELLING.

The materials actually necessary to the modeller are few and simple in character. The primary necessity is the clay, of which there are two kinds. Stoneware clay, being very malleable and easy to keep wet and in good working condition, is used for modelling finished works which require supports, such as busts, statuettes, and the like. Terra-cotta clay, which is stiff and strong, but dries unequally, and is apt to disintegrate and fall to pieces if, after being allowed to dry, it is wetted up again, is, therefore, better for use in work which can be rapidly completed, as sketches and models intended for baking, which require to be made without supports, and need a more tenacious material. Either of these clays may be obtained at any pottery.

As the clay must be kept constantly wet enough to be soft for use, it should be stored in a stone crock or zinc-lined box. The work itself can be kept damp when you cease working by swathing it in wet cloths, but it is much more convenient to cover it with a zinc cover (see Fig. 1), which can be made of any desired size by a tinsmith. This cover being set over the model, with a bowl of water beside it, the exclusion of the air and the moisture rising from the bowl will preserve your work soft and damp enough to be perfectly workable for several weeks. The zinc cover also protects the clay from being rubbed, and so preserves the modelling.

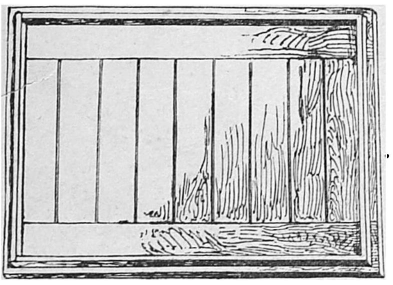

FIG. 4. BOARD FOR RELIEF MODELLING.

A modelling stand, with a top moving on a pivot, which can be readily constructed from the design (Fig. 2), is the next desideratum. This stand you can regulate according to your own height, so that your work shall be on a level with your face. I may as well remark here that in building stands and easels you should be careful to secure stout and well braced work, so that you may have a perfectly steady foundation to work on. The best way to make sure of this is to have them built of good material and perfectly jointed and fastened.

The fifth necessity is an easel for reliefs (Fig. 3), and the sixth a modelling board (Fig. 4). The modelling board is a strong wooden frame, in which are fixed cross pieces of wood of the same thickness as the frame, and at a distance of a quarter of an inch apart, to prevent the board warping and so that the clay will set between them, and thus be prevented from slipping. A narrow, thick strip of wood is nailed around the edge, making a sort of shallow box of it, and over this edge a deep box or cover is made to fit, so as to preserve the moisture in the clay. The modelling board, I need scarcely remark, is intended for use in making reliefs alone.

As a clay-covered modelling board is a great deal heavier than a canvas, you will understand the necessity of having your easel built on a more substantial plan than one you would use for painting. Some idea of the weight of your material may be obtained from the fact that in building up an ordinary human figure the size of life you will consume from five hundred pounds to half a ton of clay, or more.

A sponge for wetting the clay and a pail of water should be kept near by while you are working, for your work must frequently be wet as you go on with it, as well as dampened and covered up, as heretofore described, when you leave it.

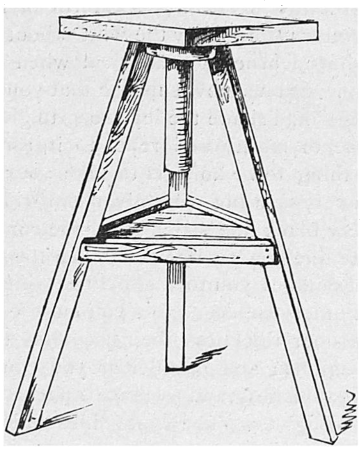

FIG. 2. MODELLING STAND.

The modeller's tools are a pair of callipers, for measuring proportions (Fig. 5), and others such as are shown in Fig. 6. The wire-modelling tools can be procured of any artists' material dealer. In New York F. W. Devoe & Co. and P. J. Ulrich give especial attention to their stock in this line. Boxwood tools are not always as accessible, and are generally made by the sculptor himself. The fingers, however, are always the best modelling tools. Mechanical ones should be used as little as possible. There are plenty of sculptors who with their fingers and a couple of home-made tools will produce the most admirable results.

Fancy tools are of no use in modelling. The list I have given above comprises absolutely all the requisites for preliminary work.

II. SETTING UP.

Small works merely made as sketches may be modelled in the clay alone, without supports; but for any modelling for which a degree of permanency is desired, a support is necessary. The character of this support depends, of course, upon the use which it is to serve.

For a bust, for instance, a very simple support is required. It may be made in the following way: Bore an inch auger hole through the middle of two pieces of inch pine wood about a foot square, and nail them together at the sides with strips of inch wood, four inches deep. This gives you a sturdy stand, with auger holes through the centre of the top and bottom boards. Then take a strip of inch wood, about an inch and a half wide, and with its length proportioned to the size of your bust, so that the upper end will penetrate half way into the head when the stick is set in the auger holes. Trim one end to fit it in the holes just as you would set up a mast in a boat, and your upright is complete. Fasten a brace of wood across it with copper wire at the place where the shoulders come, and the support is ready to be built up around, as shown in Fig. 7. The support which the modeller will require for a statuette is of a different and rather more complicated construction. For a figure say thirty inches in height take a square iron rod about two feet long and half an inch thick, with three legs or braces at the bottom, with screw holes by which they can be fastened securely to a wooden base. Any blacksmith will make this rod for you. To the top of this rod, when you have screwed it firmly on, fasten with copper wire a piece of lead pipe long enough to penetrate to the middle of the head. As the pipe is pliable, this allows the position of the head to be changed at will.

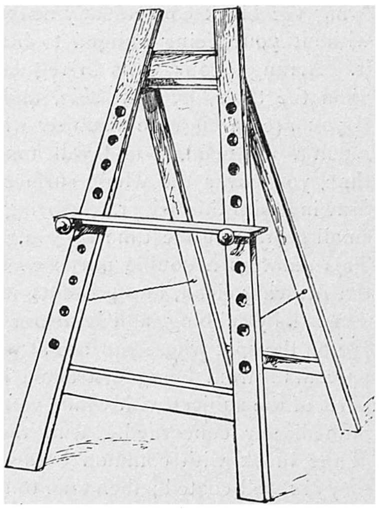

FIG. 3. EASEL FOR RELIEF MODELLING.

Fasten a brace of wood across where the shoulders are to come and another at the widest part of the hips. Through holes in these braces arrange twisted copper wire or lead pipe so as to extend through the arms and legs. As in the case of the head, pliability is desirable here, and this the wire or pipe affords. One or two pieces of wood should be attached to the upper or shoulder brace by copper wires, so as to penetrate the body and support any additional weight, although the two braces will be generally found sufficient. The method of setting up a statuette is very clearly illustrated in Fig. 9. In the case of a large statue more and stronger supports are needed, owing to the much greater weight of clay used, and they must also be more carefully arranged as to strength and firmness. But by the time you are capable of attempting work upon this massive scale you will be able to construct the necessary supports for it without instruction.

(To be continued.)

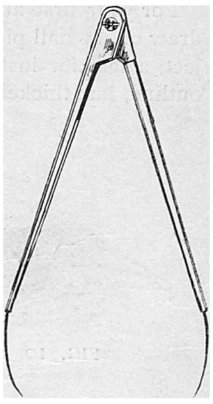

FIG. 5. MODELLER'S CALLIPERS.

There is a great deal of nonsense written and uttered about the fading of water-colors when hung in the sunlight. Experience has shown that they will not fade at all if they are under glass. If you lay a water-color under the direct rays of the sun, without any protection, it will fade. So will anything with color in it, except an oil picture. But no pictures are hung in the direct rays of the sun. The oblique rays, striking the glass, are harmless. As a matter of fact, a water-color properly mounted and tightly framed is less subject to changes than a picture in oil, whose surface is exposed to atmospheric influences and to dust and smoke, and whose back is bare to the influence of the moisture of the wall against which it hangs—an influence which is often quite pernicious.